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Comparing the Online Learning Strategies of Male and Female Diploma Students of an English Language Course

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Abstract

Language learning experiences have taken on different forms through the years. With the advent of the internet, language learning has become more interesting. This is more evident at the tertiary level where university students are more exposed to the use of computers and internet for their daily educational needs. Numerous studies have shown that students display different inclination towards their online language learning experiences according to their gender. Taking into account the above, Tsai's Online Learning Strategies Scale (OLSS) was used to gather data about the students of an English Language course at UiTM Pulau Pinang. The survey comprised five variables: motivation, self-monitoring, internet literacy, internet anxiety and concentration in online learning. Using a sample of the second semester diploma level students (n=108), this study attempted to look at the relationship among the variables, besides also studying the differences, if any between the male and female students according to the five variables. Findings showed that there was really no significant difference in the online learning experience between the male and female students. However, there existed correlations among some of the variables overall, and also according to their gender. Among others, results of this survey can be used to plan appropriate strategies for online language learning activities for both male and female students by taking into account the above variables at higher learning institutions.

Selection and/or peer-review under responsibility of the Faculty of Education, University Technology MARA, Malaysia.

Keywords: Online learning; motivation; self-monitoring; internet literacy; internet anxiety; concentration

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1. Introduction

The internet or the WWW has become the latest in the long line of educational technologies (Chun Shih & Gamon, 2002), and has also challenged the language teachers globally on the role of computers in language teaching (Warschauer & Healey, 1998). According to Niederhauser (2007), the internet has made the World Wide Web, with its hyperlinked Web pages, wikis, and blogs, the premier information source of the 21st-century. The language learning experience too has taken on a new meaning. The concepts of elearning, web-based and online learning have opened a treasure trove of virtual information to assist them in their language learning process significantly. Thus, the internet benefits the learning of English as a foreign language (EFL) quite significantly (Aydin, 2011).

With regards to the use of the internet or online learning facilities among university students, gender difference has been viewed as a major concern for researchers interested in students' abilities and attitudes toward the computer or web-based learning itself (Chen & Tsai, 2007). Hong (2002) had also found that the gender variable to be one of the critical factors that affect learners' satisfaction on the internet. On the other hand, Chen and Tsai (2007) have said that numerous studies had indicated few or no gender differences for students' attitudes toward Internet or web-based learning. Similarly, it was also found by Yukselturk and Bulut (2009) that there was no statistically significant mean difference among motivational beliefs, self-regulated learning variables and achievement with respect to gender.

Although Yang, Cho, Mathew and Worth (2011) found an interesting pattern emerging in relation to gender differences in students' effort, it is still left to be proven if this gender difference is consistent across course delivery formats. Gender difference was also found to be significant in the students' confidence about computers and stereotypical views of computer users (Chen & Tsai, 2007).

However, the picture is unclear as there are conflicting studies on gender differences in performance and interaction (Gunn et al. 2003, cited in Price, 2006). Besides, it was also discovered there was no gender difference with being online (Ono & Zavodny, 2003, cited in Chen & Tsai, 2007). In terms of anxiety of computer use, several factors such as gender, computer and internet connection ownership, internet instruction, internet familiarity, and information level on the internet had correlated significantly with the students' level of internet anxiety (Aydin, 2011). Joiner et al. (2005) had found that computer anxiety was negatively related to students' use of the Internet. According to Scealy, Phillips and Stevenson (2002), very few studies have taken into account the personality dimensions such as anxiety that may influence the internet use. Meanwhile, Wighting, Liu and Rovai (2008) had professed that the sense of community of the students and how much they are motivated to learn in an online environment affect distance learning. Similarly, the act of self-monitoring helps student to monitor his or her progress (Chang, 2007).

Through the above discussion, it can be seen that gender difference is a worthwhile factor that needs to be considered when discussing the students' online experience. Worth referring here is the meta-analysis of 14 empirical studies dealing with web-based learning and gender effects which have found that gender effects are insignificant (Astleitner & Steinberg, 2005, cited in Yukselturk & Bulut, 2009). In view of this, it is the intention of the researchers to establish if the factor of gender differs significantly with regards to the variables of motivation, self-monitoring, internet literacy, internet anxiety and concentration in their setting. For that purpose, the Online Learning Strategies Scale (OLSS) designed by Tsai (2009) to examine learners' web-based learning strategies for the five variables mentioned above was used.

Therefore, the objectives of this study were to find out the following:

i. if there exist significant relationships among the five variables of motivation, self-monitoring, internet literacy, internet anxiety and concentration that constitute the online learning strategies of the students of an English language course as a whole,

ii. if there exist significant relationships among the five variables of motivation, self-monitoring, internet literacy, internet anxiety and concentration that constitute the online learning strategies of the students of an English language course according to their gender, and
iii. if there exists a significant difference between the male and female students for each of the five variables of motivation, self-monitoring, internet literacy, internet anxiety and concentration that constitute the online learning strategies of the students of an English language course.

2. Methodology of the Survey

2.1. Sample

The sample for the study comprised 108 students from the Diploma in Electrical Engineering, Diploma in Chemical Engineering, Diploma in Chemical Engineering and Diploma in Hotel Management programmes at UiTM Pulau Pinang. Of these, 65 were male students while the remaining 43 students were female students. They were all part two students who had enrolled for BEL260 Intermediate English which is a proficiency-based course. These ethnically Malay students share the same cultural characteristics, besides belonging to the same socio-economic background. The majority of them belong to the average and below average proficiency groups in terms of their language command.

2.2. Instrument

The instrument that was used for this survey is the Online Learning Strategies Scale (OLSS) self-administered questionnaire that was developed by Tsai Meng-Jung based on the model of Strategic e-Learning (Tsai, 2009). The scale comprises 20 items made of five different variables that relate to the e-learning experience of students. The scale used the 5 point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The variables are motivation in online learning (5 items), self-monitoring in online learning (4 items), internet literacy in online learning (4 items), internet anxiety in online learning (3 items) and concentration in online learning (4 items). The items from the five variables were all jumbled up. All the items were positively stated accept those corresponding to the variable of internet anxiety in online learning. The reliability analysis using Cronbach's alpha for Tsai's original instrument returned the following levels for the five variables: motivation ($\alpha = 0.86$), self-monitoring ($\alpha = 0.67$), internet literacy ($\alpha = 0.67$), internet anxiety ($\alpha = 0.70$) and concentration ($\alpha = 0.70$). Meanwhile, the adapted version of the OLSS used in this study had the following alpha levels for the five variables: motivation ($\alpha = 0.87$), self-monitoring ($\alpha = 0.78$), internet literacy ($\alpha = 0.86$), internet anxiety ($\alpha = 0.77$) and concentration ($\alpha = 0.49$).

3. Results and Interpretation

3.1 Mean and Correlations among the variables

According to Table 1, among the five variables of the online language learning survey for the overall group, internet literacy had the highest mean of 4.38, followed by motivation for online learning with 4.15, self-monitoring in online learning with 3.58 and concentration in online learning at 3.18. These four variables all possessed means above the cut-off point of 2.50 which indicate that they are all above average. This means that the level of motivation, degree of self-monitoring, level of internet literacy and level of concentration were all high when engaged in online learning. However, the internet anxiety in online learning variable only scored a 2.63 mean. This variable which had negative statements meant that the lower the mean the lower the level of

internet anxiety. Therefore, the level of anxiety can be considered to be only at an average level when engaged in online learning for this group of students.

Table 1 also shows the correlation effects among the five variables. The motivation in online learning had a significantly high positive correlation with the self-monitoring in online learning variable (0.725), a significantly moderate positive correlation with the internet literacy in online learning variable (0.524), and a significantly low positive correlation with the concentration in online learning variable (0.379). Meanwhile, the motivation in online learning did not show any significant correlation with the internet anxiety in online learning variable. In summary, it can be concluded that there were positive relationships between the levels of motivation, degree of self-monitoring, level of internet literacy and also the level of concentration among the learners when engaged in online learning. The self-monitoring in online learning variable also displayed a moderately positive correlation with the internet literacy in online learning variable (0.491) and a significantly low positive correlation with the concentration in online learning variable (0.369).

The internet anxiety in online learning variable however, was found to have a moderately significant inverse correlation with the concentration in online learning variable (-0.405) for the overall group which suggests that the lower the students' level of anxiety in online learning, the higher their level of concentration was when engaged in online learning.

Table 1. Mean, SD and Pearson's Correlation (r) for the overall sample (n = 108)

Variables	Mean	SD	Pearson's Correlation (r)				
			1	2	3	4	5
(1) Motivation in Online Learning	4.15	0.64	-	.725**	.524**	-.153	.379**
(2) Self-monitoring in Online Learning	3.58	0.68		-	.491**	-.044	.369**
(3) Internet Literacy in Online learning	4.38	0.65			-	-.111	.159
(4) Internet Anxiety in Online Learning	2.63	0.84				-	-.405**
(5) Concentration in Online Learning	3.18	0.60					-

**. Correlation is significant at the 0.01 level (2-tailed)

According to Table 2, among the five variables of the online language learning survey for the male students of the sample, internet literacy had the highest mean of 4.38, followed by motivation for online learning with 4.10, self-monitoring in online learning with 3.52 and concentration in online learning at 3.13. These four variables all possessed means above the cut-off point of 2.50 which indicate that they are all above average. This means that the level of motivation, degree of self-monitoring, level of internet literacy and level of concentration were all high when engaged in online learning. However, the internet anxiety in online learning variable only scored 2.64 mean. This variable which had negative statements meant that the lower the mean the lower the level of internet anxiety. Therefore, the level of anxiety can be considered to be only at an average level when engaged in online learning for the male students of this group.

Table 2 also shows the correlation effects among the five variables. The motivation in online learning had a significantly high positive correlation with the self-monitoring in online learning variable (0.793), a significantly moderate positive correlation with the internet literacy in online learning variable (0.627), and a significantly low positive correlation with the concentration in online learning variable (0.380). Meanwhile, the motivation in online learning did not show any significant correlation with the internet anxiety in online learning variable. In summary, it can be concluded that there were positive relationships between the levels of motivation, degree of

self-monitoring, level of internet literacy and also the level of concentration among the learners when engaged in online learning. The self-monitoring in online learning variable also displayed a moderately positive correlation with the internet literacy in online learning variable (0.569) and a significantly low positive correlation with the concentration in online learning variable (0.369).

The internet anxiety in online learning variable however, was found to have a moderately significant inverse correlation with the concentration in online learning variable (-0.450) for the overall group which suggests that the lower the male students' level of anxiety in online learning, the higher their level of concentration was when engaged in online learning.

Table 2. Mean, SD and Pearson's Correlation (r) for the male sample (n = 65)

Variables	Mean	SD	Pearson's Correlation (r)				
			1	2	3	4	5
(1) Motivation in Online Learning	4.10	0.71	-	.793**	.627**	-.128	.380**
(2) Self-monitoring in Online Learning	3.52	0.79		-	.569**	-.103	.369**
(3) Internet Literacy in Online learning	4.38	0.73			-	-.036	.129
(4) Internet Anxiety in Online Learning	2.64	0.81				-	-.450**
(5) Concentration in Online Learning	3.13	0.53					-

**. Correlation is significant at the 0.01 level (2-tailed)

According to Table 3, among the five variables of the online language learning survey for the female students of the sample, internet literacy had the highest mean of 4.37, followed by motivation for online learning with 4.23, self-monitoring in online learning with 3.67 and concentration in online learning at 3.25. These four variables all possessed means above the cut-off point of 2.50 which indicate that they are all above average. This means that the level of motivation, degree of self-monitoring, level of internet literacy and level of concentration were all high when engaged in online learning. However, the internet anxiety in online learning variable only scored 2.60 mean. This variable which had negative statements meant that the lower the mean the lower the level of internet anxiety. Therefore, the level of anxiety can be considered to be only at an average level when engaged in online learning for the female students of this group.

Table 3 also shows the correlation effects among the five variables. The motivation in online learning only had a significantly moderate positive correlation with the self-monitoring in online learning variable (0.496) and also a significantly moderate positive correlation with the concentration in online learning variable (0.399). Meanwhile, the motivation in online learning did not show any significant correlation with the internet literacy in online learning and internet anxiety in online learning variables. In summary, it can be concluded that there were only positive relationships between the levels of motivation, degree of self-monitoring and also the level of concentration among the female learners when engaged in online learning. Although not significant, there was an indication of an inverse relationship between the level of motivation and the level of internet anxiety among the female learners when engaged in online learning. Besides that, the self-monitoring in online learning variable only displayed a moderately positive correlation with the concentration in online learning variable (0.424) for the female students.

The internet anxiety in online learning variable however, was found to have a low significant inverse correlation with the concentration in online learning variable (-0.361) for the female students of the group which suggests that the lower the female students' level of anxiety in online learning, the higher their level of concentration was when engaged in online learning.

Table 3. Mean, SD and Pearson's Correlation (r) for the female sample (n = 43)

Variables	Mean	SD	Pearson's Correlation (r)				
			1	2	3	4	5
(1) Motivation in Online Learning	4.23	0.53	-	.496**	.240	-.201	.399**
(2) Self-monitoring in Online Learning	3.67	0.47		-	.230	.097	.424**
(3) Internet Literacy in Online learning	4.37	0.52			-	-.267	.232
(4) Internet Anxiety in Online Learning	2.60	0.89				-	-.361*
(5) Concentration in Online Learning	3.25	0.69					-

**. Correlation is significant at the 0.01 level (2-tailed)

*. Correlation is significant at the 0.05 level (2-tailed)

3.2 T-test for gender differences for the variables

Table 4 shows the independent samples t-test for the male and female students of the sample group to see if there was any significant difference in terms of gender for each of the five variables. As is evident, all the five variables, namely motivation, self-monitoring, internet literacy, anxiety and concentration in online learning did not show any significant differences at the 0.05 level. It can be understood from this finding that both the male and female students do not differ in the way they were affected by the five variables above.

To discuss further, although there did not exist any significant differences in terms of the five variables between the male and females students, it can be surmised that the female students possessed slightly higher means for the variables of motivation, self-monitoring, internet literacy and concentration in online learning. This means that female students had a higher level of motivation, a higher degree of self-monitoring, a higher level of internet literacy and also a better level of concentration when engaged in online learning although these were not significant. Meanwhile, the female students also had a slightly lower level of internet anxiety compared to the male students, even though this was not significant.

Table 4. Independent samples t-test for the male and female students for the five variables

Variables	t-test results	Significant Difference (?)
Motivation in Online Learning	t = -1.123, p > 0.05	No significant difference
Self-monitoring in Online Learning	t = -1.261, p > 0.05	No significant difference
Internet Literacy in Online Learning	t = .067, p > 0.05	No significant difference
Anxiety in Online Learning	t = .220, p > 0.05	No significant difference
Concentration in Online Learning	t = -1.015, p > 0.05	No significant difference

4. Discussion and Conclusion

From the findings above, it is obvious that the students' internet literacy level is quite high, possibly explaining the fact that the sample group is very apt at sourcing for information on the internet with regards to their language learning endeavour. This is quite evident for both the male and female students as well as the overall group. This is followed by motivation in online learning where the students also scored very highly for both gender groups, and also as a whole. This goes to show that both groups are highly motivated when engaged

in online learning. The evidence of self-monitoring too is quite obvious for both the male and female students, perhaps explaining the fact that these groups of students are able to self-regulate their own learning when engaged online regardless of their gender. The level of concentration too can be said to be high among these learners for both the male and female students which would explain their ability to stay focused on their online learning task at a given time. Conversely, both genders separately and also as a whole group displayed only average levels of anxiety when engaged in online learning which could be due to the fact that they are already very *'at ease'* when surfing the internet.

In terms of relationships among the five variables, it was evident that motivation, self-monitoring, internet literacy and concentration when engaged in online learning were positively correlated with each other. On the contrary, these four variables had inverse relationships with internet anxiety for both the male and female students, and also for the overall group. This would help to explain the fact that when their internet anxiety is low, motivation, self-monitoring, internet literacy and concentration in online learning would be high, and vice-versa. Nevertheless, only concentration was found to have a significantly negative relationship with internet anxiety for the male and female students as well as for the whole group. Therefore it could be assumed that the level of internet anxiety would not be a determinant of the other factors except concentration in online learning. It was also interesting to note that for the male students, motivation showed a significantly positive relationship with all the other variables except internet anxiety. On the other hand, for the female students, motivation had such a significantly positive relationship with only two variables, namely self-monitoring and concentration. Quite strangely, motivation did not show any significant positive correlation with internet literacy for this group.

It could also be established from this study that both the male and female students did not show any significant difference for all the five variables of motivation, self-monitoring, internet literacy, internet anxiety and concentration. In other words, both these groups of students had the same level of motivation, self-monitoring, internet literacy, internet anxiety and concentration when they were engaged in online learning. This finding would concur well with the findings of the fourteen empirical studies dealing with WBL and gender effects in which the gender effects appear to be insignificant (Astleitner & Steinberg, 2005, cited in Yukselturk & Bulut, 2009).

In essence, as Chen and Tsai (2007) have said, online learning should help both male and female students so as to nurture imaginative and collaborative learners. Therefore, it would suffice to say that any online learning experience by students needs to take into account the interest and welfare of the students regardless of their gender. On the other hand, careful attention should be placed in designing stimulating courses and more challenging tasks (Wighting, Liu & Rovai, 2008) in order to maximize the students' intrinsic motivation. Higher institutions of learning also should make conscious efforts to enhance the use of online resources by training students who are either hesitant or unfamiliar to the new media (Enoch & Soker, 2006) regardless of their gender. Further, self-monitoring strategies in online learning should also be the subject of training for these students as it has been proven that such strategies work favourably towards students' motivational levels as well as their achievement (Chang, 2007).

As a conclusion, the online learning experience of students, regardless of their gender, cannot be viewed in isolation as the entire learning experience is the outcome of an interplay of several factors that constitute the online learning strategies. This study had looked at such strategies as motivation, self-monitoring, internet literacy, internet anxiety and concentration according the Online Learning Strategies Scale (OLSS) by Tsai (2009). Needless to say, there are many other factors that affect students' learning when engaged online and these factors warrant exploration too. Although this study had positively established that both the male and female students do not differ significantly in the use of the above strategies in the context of the present sample when engaged in online learning, it would be worthwhile to conduct further research to consolidate these findings under different conditions.

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